



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Takeshi IKEDA et al.

Serial No. 10/594,571

Filed September 27, 2006

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Attorney Docket No. 2006\_1611A

THE COMMISSIONER IS AUTHORIZED  
TO CHARGE ANY DEFICIENCY IN  
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ACCOUNT NO. 23-0975

WIPER CONTROL METHOD

**SUBMISSION OF ENGLISH VERSIONS OF INTERNATIONAL PRELIMINARY  
REPORT ON PATENTABILITY AND WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Submitted herewith for consideration by the Examiner are:

- 1) An English version of the International Preliminary Report on Patentability; and
- 2) An English version of the Written Opinion of the International Searching Authority.

Respectfully submitted,

Takeshi IKEDA et al.

By: 

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January 3, 2007

From the INTERNATIONAL BUREAU

**PCT**

NOTIFICATION OF TRANSMITTAL  
OF COPIES OF TRANSLATION  
OF THE INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY  
(CHAPTER I OR CHAPTER II  
OF THE PATENT COOPERATION TREATY)  
(PCT Rules 44bis.3(c) and 72.2)

To:

TAKANO, Yasushi  
TAKANO & PARTNER  
Miyamasuzaka-Toho-Estate 602,  
1-12-12 Shibuya, Shibuya-ku  
Tokyo 150-0002  
JAPON

Date of mailing (day/month/year) 12 October 2006 (12.10.2006)	
Applicant's or agent's file reference 05P00527	IMPORTANT NOTIFICATION
International application No. PCT/JP2005/004419	International filing date (day/month/year) 14 March 2005 (14.03.2005)
Applicant MITSUBA Corporation et al	

## 1. Transmittal of the translation to the applicant.



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

## 2. Transmittal of the copy of the translation to the designated or elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

None

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

## 3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer  Yoshiko Kuwahara
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# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 05P00527	<b>FOR FURTHER ACTION</b>		See item 4 below
International application No. PCT/JP2005/004419	International filing date ( <i>day/month/year</i> ) 14 March 2005 (14.03.2005)	Priority date ( <i>day/month/year</i> ) 31 March 2004 (31.03.2004)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant MITSUBA Corporation			

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Box No. I | Basis of the report   |
| <input type="checkbox"/> Box No. II           | Priority  |
| <input type="checkbox"/> Box No. III          | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/> Box No. IV           | Lack of unity of invention  |
| <input checked="" type="checkbox"/> Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> Box No. VI           | Certain documents cited   |
| <input type="checkbox"/> Box No. VII          | Certain defects in the international application  |
| <input type="checkbox"/> Box No. VIII         | Certain observations on the international application   |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Genève 20, Switzerland  Facsimile No. +41 22 338 82 70	Date of issuance of this report 04 October 2006 (04.10.2006)
	Authorized officer  Yoshiko Kuwahara  e-mail: pt07@wipo.int

# PATENT COOPERATION TREATY

TRANSLATION

From the  
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing  
(day/month/year)

Applicant's or agent's file reference  
**05P00527**

**FOR FURTHER ACTION**

See paragraph 2 below

International application No.

**PCT/JP2005/004419**

International filing date (day/month/year)

**14.03.2005**

Priority date (day/month/year)

**31.03.2004**

International Patent Classification (IPC) or both national classification and IPC

Applicant

**MITSUBA Corporation**

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/IP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2005/004419

Box No. I      Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language  
\_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2005/004419

**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Claims	2-10	YES
	Claims	1	NO
Inventive step (IS)	Claims	2-4, 8-10	YES
	Claims	1, 5-7	NO
Industrial applicability (IA)	Claims	1-10	YES
	Claims		NO

**2. Citations and explanations:**

Document 1: JP, 2002-264773, A (Mitsuba Corp.), 18 September, 2002 (18.09.02), paragraphs 0051-0063

Document 2: JP, 2000-255384, A (Asmo Co., Ltd.), 19 September, 2000 (19.09.00), paragraphs 0039-0045

Document 3: JP, 2000-511492, A (Robert Bosch GmbH), 05 September, 2000 (05.09.00), page 8, lines 4-23

Document 4: JP, 02-158446, A (Asmo Co., Ltd., Nippon Denso Co., Ltd.), 18 June, 1990 (18.06.90)

Document 5: JP, 61-247541, A (Nissan Motor Co., Ltd.), 04 November, 1986 (04.11.86)

The subject matter of claim 1 does not appear to be novel according to document 1 cited in the ISR.

In a device described in document 1, after sudden power failure to a wiper control device during wiper operation and when power is restarted, since the estimated number of relative position signals disappear, this condition is recognized as corresponding with "abnormal development of relative position signals" of the subject matter of claim 1. Moreover, in the device described in document 1, when restarting the power, the rotating direction of a motor based on an absolute value signal is reversed (reference paragraph 0060).

Therefore, there is no difference between the subject matter of claim 1 and the subject matter described in document 1.

The subject matters of claims 2-4 are not disclosed in any of the documents cited in the ISR and appear to be novel and to involve an inventive step. In particular, when an abnormality develops in the relative position signals, a) the absolute position signal in the first standard position built in the vicinity of the forward rotating position, and b) reversing the rotating direction of a motor based on an absolute value in the second standard position built in the vicinity of the backward rotating position are not disclosed in any of the documents.

The subject matters of claims 5-7 do not appear to involve an inventive step according to documents 2 and 3 cited in the ISR.

In document 2, when detecting the count of a relative position signal (pulse count) from the fixed front position of a rotating position attaining a permitted limit position before attaining a fixed number, reversing the rotating direction of a motor is described. In document 2, although there is no description relating to the control of an abnormality in a relative position signal developing, in the device described in document 2, provisionally, when an abnormality develops in a relative position signal, detect the reversing of a motor's rotating direction attaining the above-mentioned permitted limit position is a matter obvious to a person skilled in the art. Moreover, in document 3, in a wiper control method, the performing a wiping operation by output of an output position signal and a

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2005/004419

Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

relative position signal having a control method that mechanically controls the operation in an operation limit position (parked position) built in a position that exceeds the backward rotating position are described.

Therefore, in the device described in document 2, when an abnormality develops in a relative position signal and a wiper arm is controlled by a control method, the reversing of the rotating direction of a motor is a matter easily obtainable for a person skilled in the art.

The subject matter of claim 8 is not disclosed in any of the documents cited in the ISR and appears to be novel and to involve an inventive step. In particular, when an abnormality develops in a relative position signal, reversing the rotating direction of a motor in a fixed time interval along with driving a motor by constant output is not disclosed in any of the documents.

The subject matters of claims 9 and 10 are not disclosed in any of the documents cited in the ISR and appear to be novel and to involve an inventive step. In particular, in the event an abnormality develops in a relative position signal, when reversing the rotating direction of a motor based on an absolute position signal and when adding to a relative position signal and an abnormality develops in an absolute position signal, being built in a position that exceeds a forward rotating position and a backward rotating position and reversing the rotating direction of a motor when the operation of a wiper arm is mechanically controlled and reaches the operation limit position are not disclosed in any of the documents.